Remarks

Claims 3-6 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Pickard (US 3,120,282) in view of Miller (US 1,499,024).

The above-mentioned rejection is respectfully traversed and submitted to be inapplicable to the claims for the following reasons.

Claim 3 is patentable over the combination of Pickard and Miller, since claims 3 recites a remote operation wire line core sampling device including, in part, an over-shot assembly for grasping an upper end portion of an inner tube assembly, wherein a water swivel assembly accommodates the over-shot assembly at an intermediate position thereof between an upper water input port and a lower water input port such that pressurized fluid is supplied from the upper water input port to lower the over-shot assembly through a drill rod to an upper end of the inner tube assembly. The combination of Pickard and Miller fails to disclose or suggest the over-shot assembly as recited in claim 3.

Pickard discloses a drilling apparatus including an overshot assembly 125 and a water swivel 20. The water swivel 20 has an end portion 21 that is connected to a threaded female end 18 of a drill stem 10 and another end portion (opposite to the end portion 21) that is connected to a hydraulic pump 25 via a pipe 22, a T-joint 23, and a pipe 24. (See column 5, lines 12-35 and Figures 1 and 2).

During operation of the drilling apparatus, when it is desired to retract a core barrel inner tube assembly from the bit end of the drill stem 10, the overshot assembly 125 is inserted into the drill stem 10. Then, the hydraulic pump 25 is activated to pump fluid into the drill stem 10 via the pipe 24, the T-joint 23, the pipe 22 and though the water swivel 20 (the fluid flowing from the other end portion to the end portion 21 in the water swivel 20) to propel the overshot assembly 125 in a direction 153. (See column 11, line 63 – column 12, line 12 and Figure 15).

Based on the above discussion and as admitted in the rejection, it is clear that the water swivel 20 has only one fluid input port (i.e., the other end portion) that is adapted to allow pressurized fluid into the water swivel 20. The end portion 21 is clearly adapted only to allow pressurized fluid to output the water swivel 20 into the drill stem 10. Therefore, the water swivel 20 does not have both an upper water input port at an upper position of the water swivel assembly and a lower water input port at a lower position of the water swivel assembly, whereby

the over-shot assembly 125 is at an intermediate position thereof between the upper water input port and the lower water input port.

In light of Pickard's failure to disclose both upper and lower water input ports, Miller is relied upon as teaching this feature. Miller discloses a water swivel 34 having a pipe 36 attached thereto that is connected to a slush pump. The water swivel 34 also has a branch 39 for discharging any waste water which is forced through an opening 38 during the operation of the slush pump. (See page 2, lines 48-65 and Figure 2).

In the rejection, the pipe 36 and the branch 39 of Miller are relied upon as corresponding to the claimed upper and lower water ports. However, modifying the water swivel 20 of Pickard with the water swivel 34 of Miller, would still fail to result in the disclosure or suggestion of the claimed position of the over-shot assembly. As discussed above, the branch 39 of the water swivel 34 of Miller is a safety device to discharge waste water during operation of the slush pump. Therefore, modifying the water swivel 20 of Pickard based on the water swivel 34 of Miller would result in two water ports being located on one side of the overshot assembly 125. It is clear that such a modification still fails to disclose or suggest the claimed feature of the over-shot assembly being between the water input ports. Further, in reviewing the manner in which the pipe 36 and the branch 39 are connected in Figure 2 (i.e., by the narrow connection 37), as well as the purpose of the branch 39, it would not have been obvious to somehow further modify either the water swivel 20 of Pickard or the water swivel 34 of Miller to position the overshot assembly 125 of Pickard to meet this limitation of claim 3. As a result, it is submitted that claim 3 is patentable over the combination of Pickard and Miller.

Because of the above-mentioned distinctions, it is believed clear that claims 3-6 are allowable over the references relied upon in the rejection. Furthermore, it is submitted that the distinctions are such that a person having ordinary skill in the art at the time of invention would not have been motivated to modify Pickard or to make any combination of the references of record in such a manner as to result in, or otherwise render obvious, the present invention as recited in claims 3-6. Therefore, it is submitted that claims 3-6 are clearly allowable over the prior art of record.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. The Examiner is invited to contact the undersigned by telephone if it is felt that there are issues remaining which must be resolved before allowance of the application.

Respectfully submitted,

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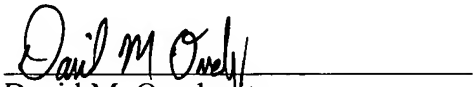
By: 

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February 26, 2009